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April Precipitation

Water Levels for the Great Lakes and Montreal Harbour
... *a monthly bulletin from Canadian Hydrographic Service*

About the monthly Water Level bulletin

April Precipitation Over the Great Lakes

As a percentage of the long-term April average:

Great Lakes Basin	145%
Lake Erie (including Lake St. Clair)	157%
Lake Superior	140%
Lakes Michigan-Huron	141%
Lake Ontario	153%

Note: These figures

LEVEL news

Volume 4, Number 5 **May 5, 1996**

Lakes Near Average Levels

Late April Rains Raise Water Levels

After a dry March and early April, abundant rainfall returned to the Great Lakes basin in the latter part of the month.

The April rain coincided with the Ottawa River spring freshet, which significantly increased inflow into the St. Lawrence River near Montreal. As a result, Lake St. Louis' level rose to near flood stage. Until the rain arrived, there had been concern that a repeat of last year's very low water levels on Lake St. Louis would seriously affect fish spawning and area wetlands.

The St. Lawrence River water level at the Port of Montreal rose to more than two metres above chart datum at the end of April. The harbour level is expected to decline gradually over the next few weeks but remain well above chart datum.

Lake Ontario's level rose from below average in early April, to near average by month's end. A further moderate rise in level is expected until June or July, depending on rainfall over that period.

Lake St. Clair's level dropped drastically due to an ice jam in the St. Clair River, which reduced flow from Lake Huron. Extensive ice breaking efforts cleared the jam late in the month and the lake's level recovered to slightly above average by early May.

Lake Erie's level was also depressed by the ice jam, but the impact was much less than on Lake St. Clair. By the end of April, heavy rainfall had pushed up Lake Erie's level to several centimetres above the seasonal average. Lake Erie's level is expected to peak in about July.

Lakes Huron and Superior are both currently slightly above average. Their levels began to rise during the last half of the month, and they are expected to continue to rise gradually until August or September.

With levels on all the Great Lakes very close to average, the risk of serious flooding around the lakes remains low.

Repairs at St. Marys River Control Structure Begin

are preliminary.
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Summary information for "LEVEL*news*"

From mid-May until October, workers will carry out repair and maintenance work on the compensating works located at the head of the St. Marys Rapids at Sault Ste. Marie, Ontario.

The 16-gated control structure was built between 1902 and 1919. Since 1921, when the last dyke closure was complete, the control structure has been used to regulate the outflows of Lake Superior under the direction of the International Joint Commission.

The flow out of Lake Superior passes through either the control structure or the hydropower plants located at the Rapids. Each month adjustments are made to the gate settings and/or flows through the hydropower plants such that the total flow equals the amount specified by the IJC's regulation plan.

Unlike newer designs where shelter forms a part of a structure, the St. Marys River control structure is exposed to the harsh winters and repeated ice action. Following engineering testing and structural reinforcing in the mid-1980's, the structure was found to be in good shape, but repairs are necessary to maintain it in good working condition.

Repairs are the responsibility of the dam's owners. The Canadian portion of the structure is owned by Great Lakes Power Company Limited while U.S. Army Corps of Engineers owns the other half.

Work this year will include de-watering some gates to facilitate concrete and masonry work in areas that are normally under water, replacement of gate sills and seals, repairs to mechanical parts that operate the gates, deck replacement and general cleaning and painting.

Workers will use barges to serve as work platforms and to transport equipment. To avoid high water velocities at the site, most of the gates will be opened slightly and each will discharge a small amount of flow. Usually, a limited number of gates are either one-half or fully open, and most of the gates are fully closed.

St. Clair River Ice Jam Reduces Flows

During much of April an ice jam blocked part of the St. Clair River and greatly reduced the river's flow. While the impact on Lake Huron's level was very small, it caused a large, temporary decline in Lake St. Clair's level and a small depression of Lake Erie's level.

For several days the level of Lake St. Clair was as much as 50 centimetres lower than it would otherwise have been. Once the jam dissipated, the lake's level went back up 50 centimetres over a five day period.

While most of the ice jam's effects on lake levels quickly dissappeared, it did cause the lowest April levels on Lakes St. Clair and Erie in three decades.

Ice Boom Removed

Removal of the Lake Erie-Niagara River ice boom began on April 17 and was completed on May 3. The boom is installed each winter to enhance

formation of a stable ice cover, which has reduced formation of ice jams in the river.

Control Boards Plan Public Meetings

The International St. Lawrence River Board of Control is holding its annual public meeting on June 3 at 7:00 p.m. at the Best Western Carriage House Inn, 300 Washington Street, Watertown, NY. Topics to be discussed will include progress on the study to improve Lake Ontario regulation.

The International Lake Superior Board of Control will hold its public meeting on June 18 at 7:00 p.m. in the Paradise Community Centre, Paradise MI. The community is located along the shore of Whitefish Bay.

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Last Updated: 2001-04-04 URL: http://www.on.ec.gc.ca/water/level-news/lvn96may.html
Last Reviewed: 2001-04-04